

ABSTRACT OF THE DISCLOSURE

Disclosed is a film-forming method, comprising supplying into a plasma processing chamber at least three kinds of gases including a silicon compound gas, an oxidizing gas, and a rare gas, the percentage of the partial pressure of the rare gas (Pr) based on the total pressure being not smaller than 85%, i.e.,  $85\% \leq Pr < 100\%$ , and generating a plasma within the plasma processing chamber so as to form a film of silicon oxide on a substrate to be processed.